

WHAT IS CLAIMED IS:

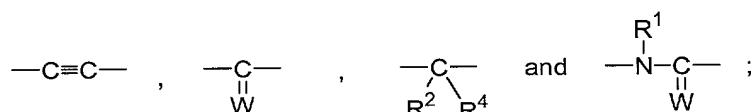
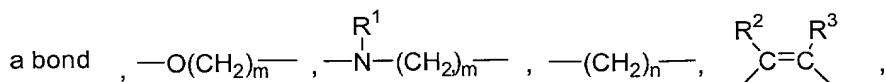
1. A compound having the formula:



3 or a pharmaceutically acceptable salt thereof, wherein

4 A and B are each members independently selected from the group consisting of
5 substituted and unsubstituted aryl and substituted and unsubstituted
6 heteroaryl;

7 X and Y are each members independently selected from the group consisting of:



with the proviso that at least one of X or Y is a bond, and wherein

the subscript m is 0, 1 or 2;

the subscript n is 1 or 2;

12 W is a member selected from the group consisting of O, N-OR⁵, N-NR¹R²,

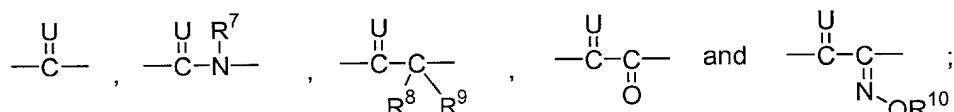
13 N-NR¹C(O)R⁶ and N-OC(O)R⁶;

14 R¹, R², R³, and R⁵ are each members independently selected from the
 15 group consisting of H, (C₁-C₆)alkyl, aryl, aryl(C₁-C₆)alkyl,
 16 1-4-phenylene, 1,1-biphenyl(C₁-C₆)alkyl;

16 Heteroaryl and heteroalkyl (1-6) groups;
17 R⁴ is a member selected from the group consisting of H, OH, (C₁-C₆)alkyl,
18 (C₁-C₆)alkoxy, amino, (C₁-C₆)alkylamino, di(C₁-C₆)alkylamino,
19 (C₁-C₆)acylamino, and (C₁-C₈)heteroalkyl; and

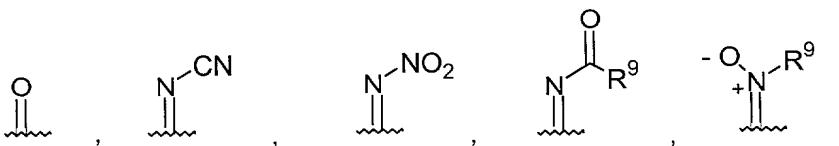
20 R⁶ is a member selected from the group consisting of H, (C₁-C₆)alkyl, (C₁-
21 C₆)alkoxy, amino, (C₁-C₆)alkylamino, di(C₁-C₆)alkylamino and
22 (C₁-C₈)heteroalkyl; and

23 M is a divalent linking group selected from the group consisting of:



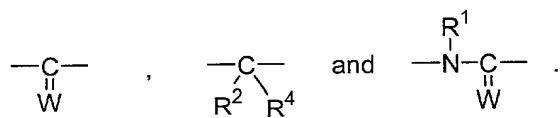
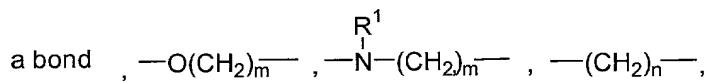
wherein

U is a member selected from the group consisting of:

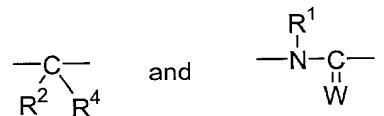
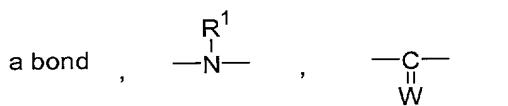


28 R⁷ and R⁸ are each independently members selected from the group
 29 consisting of H, OH, (C₁-C₆)alkyl, (C₁-C₆)alkoxy, amino, (C₁-
 30 C₆)alkylamino and di(C₁-C₆)alkylamino;
 31 R⁹ is a member selected from the group consisting of H, (C₁-C₆)alkyl, aryl,
 32 aryl(C₁-C₆)alkyl, heteroaryl and heteroaryl(C₁-C₆)alkyl;
 33 R¹⁰ is a member selected from the group consisting of H, (C₁-C₆)alkyl,
 34 aryl(C₁-C₆)alkyl and heteroaryl(C₁-C₆)alkyl; and
 35 R¹¹ and R¹² are members independently selected from the group consisting
 36 of H, (C₁-C₆)alkyl, aryl(C₁-C₆)alkyl, heteroaryl(C₁-C₆)alkyl,
 37 C(O)R¹⁴, C(O)OR¹⁴, C(O)-NR¹⁴R¹⁵, S(O)₂R¹³ and S(O)₂NR¹⁴R¹⁵;
 38 wherein
 39 R¹³ is a member selected from the group consisting of (C₁-C₆)alkyl,
 40 (C₁-C₆)heteroalkyl, phenyl and substituted phenyl; and
 41 R¹⁴ and R¹⁵ are each members independently selected from the
 42 group consisting of H, (C₁-C₆)alkyl and (C₁-C₆)heteroalkyl.
 43

1 2. A compound of claim 1, wherein X and Y are independently
 2 selected from the group consisting of:

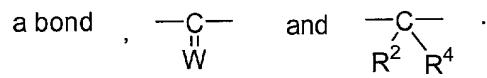


1 3. A compound of claim 1, wherein X and Y are each independently
 2 selected from the group consisting of:



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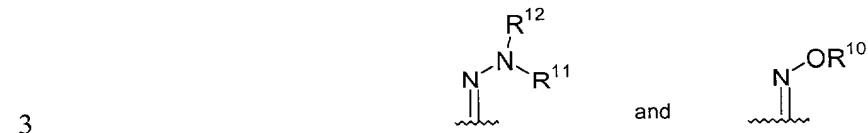
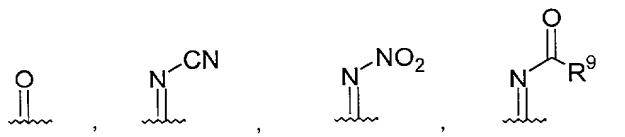
1 4. A compound of claim 1, wherein X and Y are each independently
2 selected from the group consisting of:



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1 5. A compound of claim 1, wherein M is $\text{—C}^{\text{U}}\text{—N}^{\text{R}^7}\text{—}$.

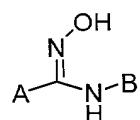
1 6. A compound of claim 1, wherein X and Y are each a bond, and M
2 is $\text{—C}^{\text{U}}\text{—N}^{\text{R}^7}\text{—}$, wherein U is selected from the group consisting of



1 7. A compound of claim 6, wherein U is selected from the group
2 consisting of



1 8. A compound of claim 1, said compound having the formula:

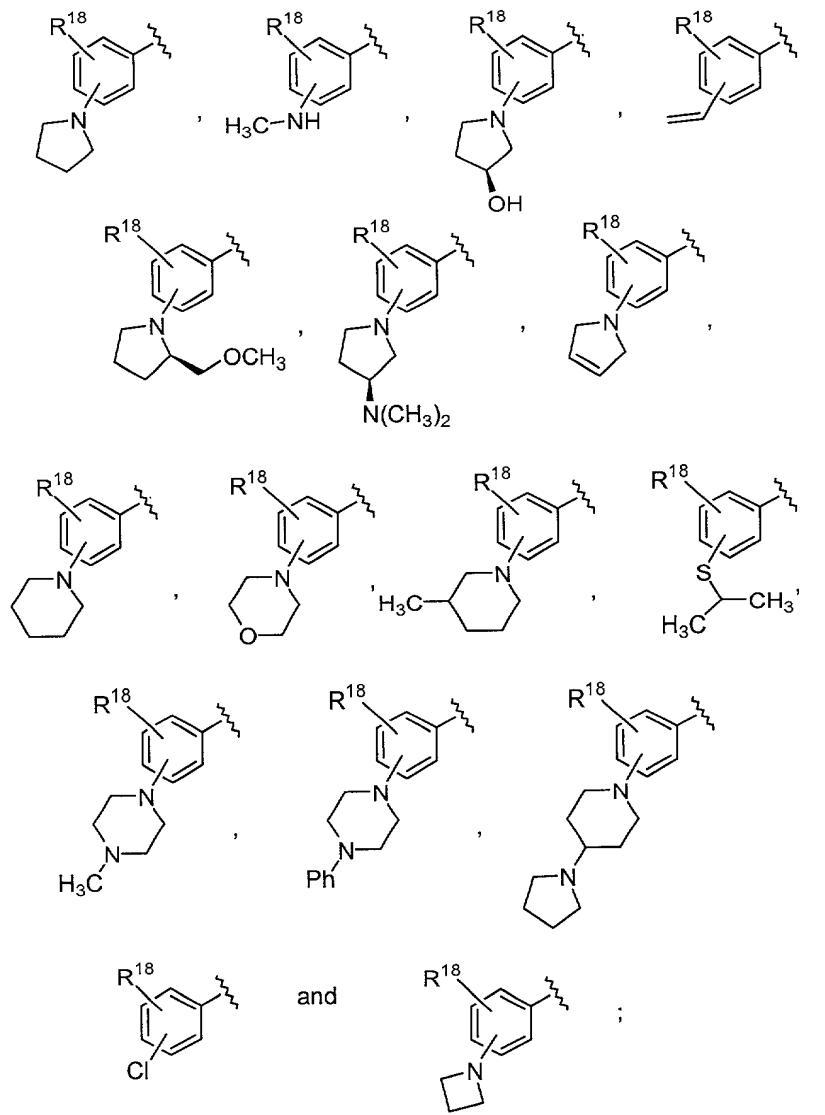


1 **9.** A compound of claim **8**, wherein A is a phenyl group substituted
2 with from one to three substituents selected from the group consisting of (C₁-C₄)alkyl,
3 (C₁-C₄)alkoxy, (C₁-C₄)haloalkyl, (C₁-C₄)haloalkoxy, halogen, nitro, phenyl, naphthyl,
4 pyrrolyl, pyrazolyl and -NR¹⁶R¹⁷ wherein R¹⁶ and R¹⁷ are independently selected from
5 the group consisting of hydrogen, (C₁-C₈)alkyl and (C₁-C₈)heteroalkyl or are combined
6 with the nitrogen atom to which each is attached to form a four-, five-, six- or seven-
7 membered ring optionally having additional heteroatoms as ring members and optionally
8 having additional substituents selected from the group consisting of (C₁-C₈)alkyl, (C₁-
9 C₈)heteroalkyl and phenyl.

1 **10.** A compound of claim **8**, wherein B is a phenyl group substituted
2 with from one to three substituents selected from the group consisting of (C₁-C₄)alkyl,
3 (C₁-C₄)alkoxy, (C₁-C₄)heteroalkyl, (C₁-C₄)haloalkyl, (C₁-C₄)haloalkoxy, halogen, phenyl
4 and phenoxy.

1 **11.** A compound of claim **8**, wherein A is a phenyl group substituted
2 with from one to three substituents selected from the group consisting of (C₁-C₄)alkyl,
3 (C₁-C₄)alkoxy, (C₁-C₄)haloalkyl, (C₁-C₄)haloalkoxy, halogen and -NR¹⁶R¹⁷ wherein R¹⁶
4 and R¹⁷ are independently selected from the group consisting of hydrogen, (C₁-C₈)alkyl
5 and (C₁-C₈)heteroalkyl or are combined with the nitrogen atom to which each is attached
6 to form a four-, five-, six- or seven-membered ring optionally having additional
7 heteroatoms as ring members and optionally having additional substituents selected from
8 the group consisting of (C₁-C₈)alkyl, (C₁-C₈)heteroalkyl and phenyl, and B is a phenyl
9 group substituted with from one to three substituents selected from the group consisting
10 of (C₁-C₄)alkyl, (C₁-C₄)alkoxy, (C₁-C₄)heteroalkyl, (C₁-C₄)haloalkyl, (C₁-C₄)haloalkoxy,
11 halogen, phenyl and phenoxy.

1 **12.** A compound of claim **8**, wherein A is selected from the group
2 consisting of substituted or unsubstituted thienyl, substituted or unsubstituted furanyl,
3 substituted or unsubstituted indolyl, substituted or unsubstituted benzothienyl, substituted
4 or unsubstituted benzothienyl, and radicals of the formulae:



5

6 wherein R¹⁸ is a member selected from the group consisting of (C₁-
7 C₄)alkyl, (C₁-C₄)alkoxy, (C₁-C₄)heteroalkyl, (C₁-C₄)haloalkyl, (C₁-C₄)haloalkoxy and
8 halogen.

1 **13.** A compound of claim 8, wherein A is selected from the group
2 consisting of substituted or unsubstituted benzofuranyl, substituted or unsubstituted
3 benzothienyl, substituted or unsubstituted indolyl, substituted or unsubstituted
4 benzimidazolyl, substituted or unsubstituted benzthiazolyl and substituted or
5 unsubstituted benzoxazolyl.

1 **14.** A method of reducing bacterial growth on a surface, said method
2 comprising contacting said surface with a compound of claim 1.

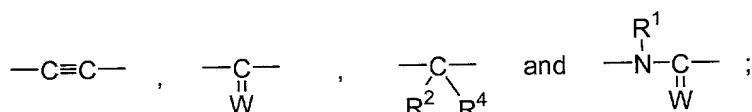
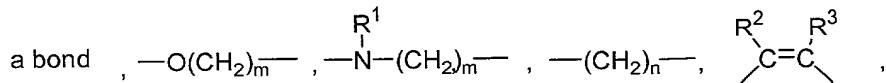
1 15. A method of treating a bacterial infection comprising contacting a
2 subject in need of such treatment with an effective amount of a compound having the
3 formula:

A-X-M-Y-B

5 or a pharmaceutically acceptable salt thereof, wherein

6 A and B are each members independently selected from the group consisting of
7 substituted and unsubstituted aryl and substituted and unsubstituted
8 heteroaryl;

9 X and Y are each members independently selected from the group consisting of:



11 with the proviso that at least one of X or Y is a bond, and wherein

the subscript m is 0, 1 or 2;

the subscript n is 1 or 2;

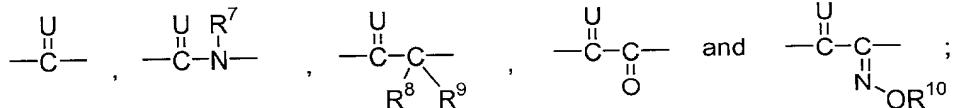
14 W is a member selected from the group consisting of O, N-OR⁵, N-NR¹R²,
15 N-NR¹C(O)R⁶ and N-OC(O)R⁶;

16 R¹, R², R³ and R⁵ are each members independently selected from the group
17 consisting of H, (C₁-C₆)alkyl, aryl, aryl(C₁-C₆)alkyl, heteroaryl and
18 heteroaryl(C₁-C₆)alkyl;

19 R⁴ is a member selected from the group consisting of H, OH, (C₁-C₆)alkyl,
20 (C₁-C₆)alkoxy, amino, (C₁-C₆)alkylamino, di(C₁-C₆)alkylamino,
21 (C₁-C₆)acylamino, and (C₁-C₈)heteroalkyl; and

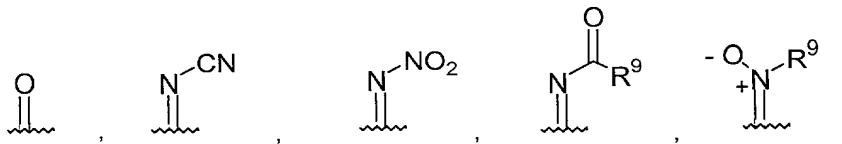
22 R⁶ is a member selected from the group consisting of H, (C₁-C₆)alkyl, (C₁-
23 C₆)alkoxy, amino, (C₁-C₆)alkylamino, di(C₁-C₆)alkylamino and
24 (C₁-C₈)heteroalkyl; and

25 M is a divalent linking group selected from the group consisting of:



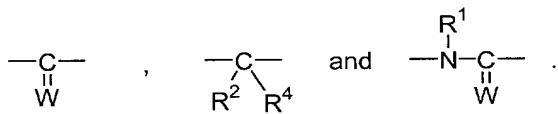
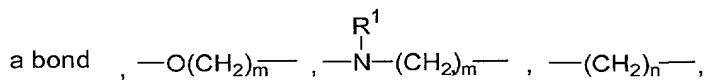
wherein

28 U is a member selected from the group consisting of:

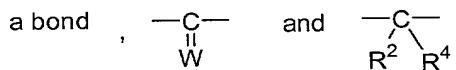


30 R⁷ and R⁸ are each members independently selected from the group
 31 consisting of H, OH, (C₁-C₆)alkyl, (C₁-C₆)alkoxy, amino, (C₁-
 32 C₆)alkylamino and di(C₁-C₆)alkylamino;
 33 R⁹ is a member selected from the group consisting of H, (C₁-C₆)alkyl, aryl,
 34 aryl(C₁-C₆)alkyl, heteroaryl and heteroaryl(C₁-C₆)alkyl;
 35 R¹⁰ is a member selected from the group consisting of H, (C₁-C₆)alkyl,
 36 aryl(C₁-C₆)alkyl and heteroaryl(C₁-C₆)alkyl; and
 37 R¹¹ and R¹² are members independently selected from the group consisting
 38 of H, (C₁-C₆)alkyl, aryl(C₁-C₆)alkyl, heteroaryl(C₁-C₆)alkyl,
 39 C(O)R¹⁴, C(O)OR¹⁴, C(O)-NR¹⁴R¹⁵, S(O)₂R¹³ and S(O)₂NR¹⁴R¹⁵;
 40 wherein
 41 R¹³ is a member selected from the group consisting of (C₁-C₆)alkyl,
 42 (C₁-C₆)heteroalkyl, phenyl and substituted phenyl; and
 43 R¹⁴ and R¹⁵ are each members independently selected from the
 44 group consisting of H, (C₁-C₆)alkyl and (C₁-C₆)heteroalkyl.
 45

1 16. A method in accordance with claim 15, wherein X and Y are
 2 independently selected from the group consisting of:



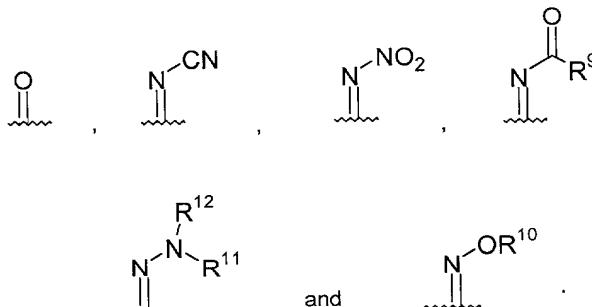
1 17. A method in accordance with claim 15, wherein X and Y are each
 2 independently selected from the group consisting of:



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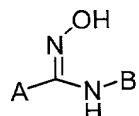
1 **18.** A method in accordance with claim 15, wherein X and Y are each a

2 bond, and M is —C—N—, wherein U is selected from the group consisting of



3

1 **19.** A method in accordance with claim 15, said compound having the
2 formula:



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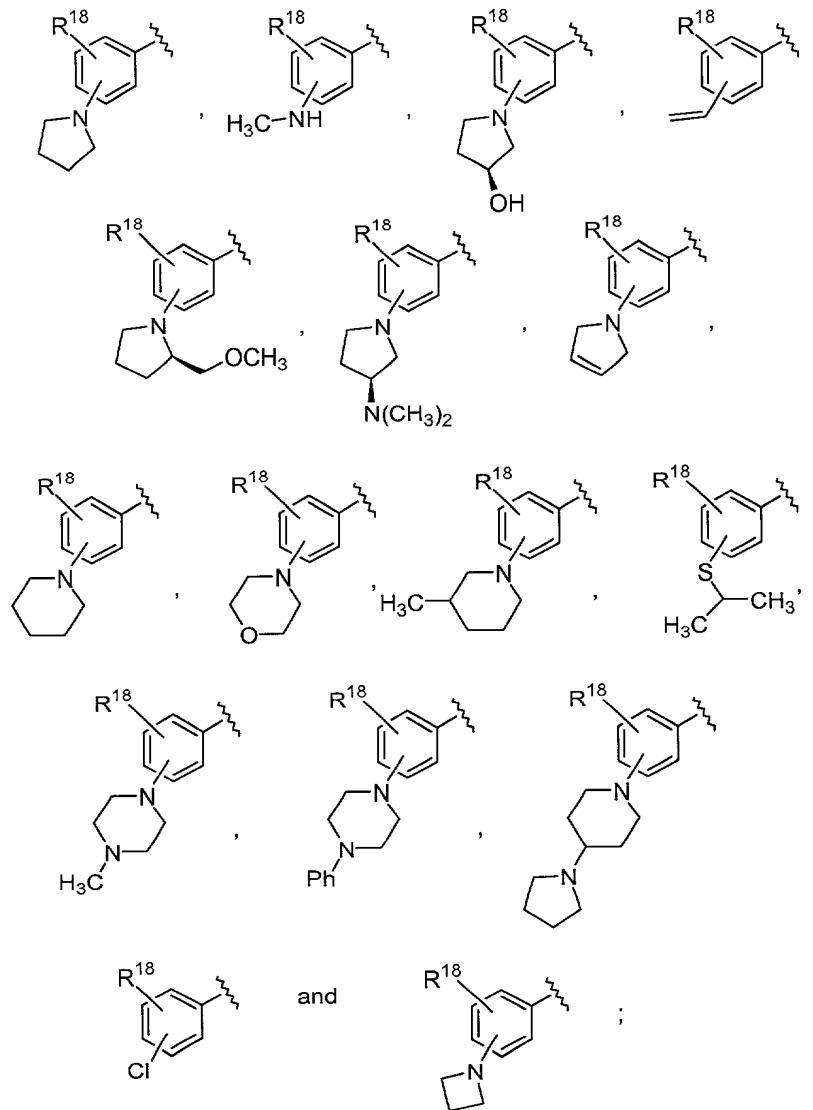
1 **20.** A method in accordance with claim 19, wherein A is a phenyl
2 group substituted with from one to three substituents selected from the group consisting
3 of (C₁-C₄)alkyl, (C₁-C₄)alkoxy, (C₁-C₄)haloalkyl, (C₁-C₄)haloalkoxy, halogen, nitro,
4 phenyl, naphthyl, pyrrolyl, pyrazolyl and —NR¹⁶R¹⁷ wherein R¹⁶ and R¹⁷ are
5 independently selected from the group consisting of hydrogen, (C₁-C₈)alkyl and (C₁-
6 C₈)heteroalkyl or are combined with the nitrogen atom to which each is attached to form
7 a four-, five-, six- or seven-membered ring optionally having additional heteroatoms as
8 ring members and optionally having additional substituents selected from the group
9 consisting of (C₁-C₈)alkyl, (C₁-C₈)heteroalkyl and phenyl.

1 **21.** A method in accordance with claim 19, wherein B is a phenyl
2 group substituted with from one to three substituents selected from the group consisting
3 of (C₁-C₄)alkyl, (C₁-C₄)alkoxy, (C₁-C₄)heteroalkyl, (C₁-C₄)haloalkyl, (C₁-C₄)haloalkoxy,
4 halogen, phenyl and phenoxy.

1 **22.** A method in accordance with claim 19, wherein A is a phenyl
2 group substituted with from one to three substituents selected from the group consisting

3 of (C₁-C₄)alkyl, (C₁-C₄)alkoxy, (C₁-C₄)haloalkyl, (C₁-C₄)haloalkoxy, halogen and –
4 NR¹⁶R¹⁷ wherein R¹⁶ and R¹⁷ are independently selected from the group consisting of
5 hydrogen, (C₁-C₈)alkyl and (C₁-C₈)heteroalkyl or are combined with the nitrogen atom to
6 which each is attached to form a four-, five-, six- or seven-membered ring optionally
7 having additional heteroatoms as ring members and optionally having additional
8 substituents selected from the group consisting of (C₁-C₈)alkyl, (C₁-C₈)heteroalkyl and
9 phenyl, and B is a phenyl group substituted with from one to three substituents selected
10 from the group consisting of (C₁-C₄)alkyl, (C₁-C₄)alkoxy, (C₁-C₄)heteroalkyl, (C₁-
11 C₄)haloalkyl, (C₁-C₄)haloalkoxy, halogen, phenyl and phenoxy.

1 **23.** A method in accordance with claim 19, wherein A is selected from
2 the group consisting of substituted or unsubstituted thienyl, substituted or unsubstituted
3 furanyl, substituted or unsubstituted indolyl, substituted or unsubstituted benzothienyl,
4 substituted or unsubstituted benzothienyl, and radicals of the formulae:



5

6 wherein R¹⁸ is a member selected from the group consisting of (C₁-
7 C₄)alkyl, (C₁-C₄)alkoxy, (C₁-C₄)heteroalkyl, (C₁-C₄)haloalkyl, (C₁-C₄)haloalkoxy and
8 halogen.

1 **24.** A method in accordance with claim **23**, wherein A is selected from
2 the group consisting of substituted or unsubstituted benzofuranyl, substituted or
3 unsubstituted benzothienyl, substituted or unsubstituted indolyl, substituted or
4 unsubstituted benzimidazolyl, substituted or unsubstituted benzthiazolyl and substituted
5 or unsubstituted benzoxazolyl.

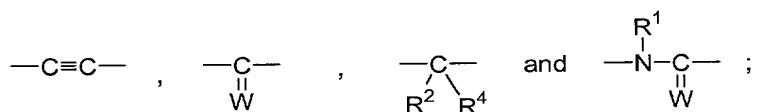
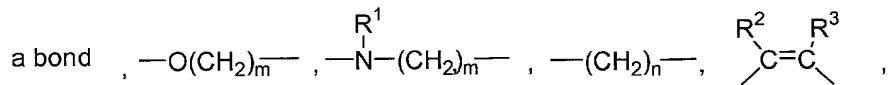
1 **25.** A composition comprising a pharmaceutically acceptable excipient
2 in admixture with a compound having the formula:

A-X-M-Y-B

4 or a pharmaceutically acceptable salt thereof, wherein

5 A and B are each members independently selected from the group consisting of
6 substituted and unsubstituted aryl and substituted and unsubstituted
7 heteroaryl;

8 X and Y are each members independently selected from the group consisting of:



with the proviso that at least one of X or Y is a bond, and wherein

the subscript m is 0, 1 or 2;

the subscript n is 1 or 2;

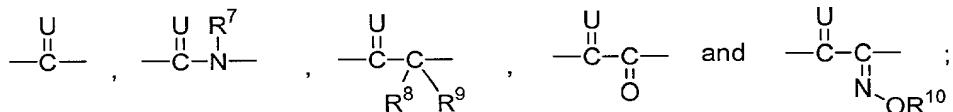
W is a member selected from the group consisting of O, N-OR⁵, N-NR¹R², N-NR¹C(O)R⁶ and N-OC(O)R⁶;

R^1 , R^2 , R^3 and R^5 are each members independently selected from the group consisting of H, (C_1-C_6) alkyl, aryl, aryl(C_1-C_6)alkyl, heteroaryl and heteroaryl(C_1-C_6)alkyl;

R^4 is a member selected from the group consisting of H, OH, (C_1-C_6)alkyl, (C_1-C_6)alkoxy, amino, (C_1-C_6)alkylamino, di(C_1-C_6)alkylamino, (C_1-C_6)acylamino, and (C_1-C_6)heteroalkyl; and

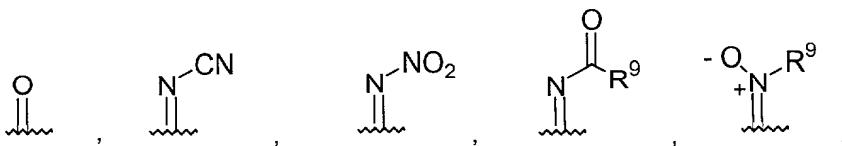
R^6 is a member selected from the group consisting of H, (C₁-C₆)alkyl, (C₁-C₆)alkoxy, amino, (C₁-C₆)alkylamino, di(C₁-C₆)alkylamino and (C₁-C₈)heteroalkyl; and

M is a divalent linking group selected from the group consisting of:



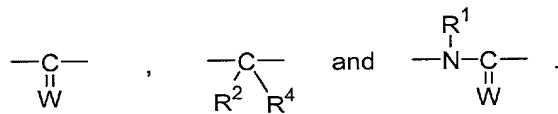
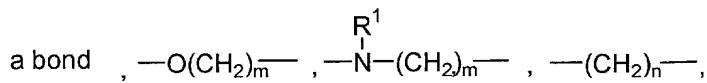
wherein

U is a member selected from the group consisting of:



29 R⁷ and R⁸ are each members independently selected from the group
 30 consisting of H, OH, (C₁-C₆)alkyl, (C₁-C₆)alkoxy, amino, (C₁-
 31 C₆)alkylamino and di(C₁-C₆)alkylamino;
 32 R⁹ is a member selected from the group consisting of H, (C₁-C₆)alkyl, aryl,
 33 aryl(C₁-C₆)alkyl, heteroaryl and heteroaryl(C₁-C₆)alkyl;
 34 R¹⁰ is a member selected from the group consisting of H, (C₁-C₆)alkyl,
 35 aryl(C₁-C₆)alkyl and heteroaryl(C₁-C₆)alkyl; and
 36 R¹¹ and R¹² are members independently selected from the group consisting
 37 of H, (C₁-C₆)alkyl, aryl(C₁-C₆)alkyl, heteroaryl(C₁-C₆)alkyl,
 38 C(O)R¹⁴, C(O)OR¹⁴, C(O)-NR¹⁴R¹⁵, S(O)₂R¹³ and S(O)₂NR¹⁴R¹⁵;
 39 wherein
 40 R¹³ is a member selected from the group consisting of (C₁-C₆)alkyl,
 41 (C₁-C₆)heteroalkyl, phenyl and substituted phenyl; and
 42 R¹⁴ and R¹⁵ are each members independently selected from the group
 43 consisting of H, (C₁-C₆)alkyl and (C₁-C₆)heteroalkyl.
 44

1 **26.** A composition in accordance with claim **25**, wherein X and Y are
 2 independently selected from the group consisting of:

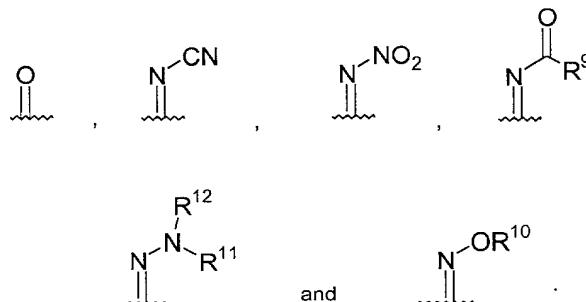


1 **27.** A composition in accordance with claim **25**, wherein X and Y are
 2 each independently selected from the group consisting of:

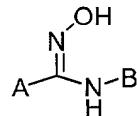
3 a bond , —C— and —C— .

1 **28.** A composition in accordance with claim **25**, wherein X and Y are

2 each a bond, and M is —C—N—, wherein U is selected from the group consisting of



1 **29.** A composition in accordance with claim **25**, said compound having
2 the formula:

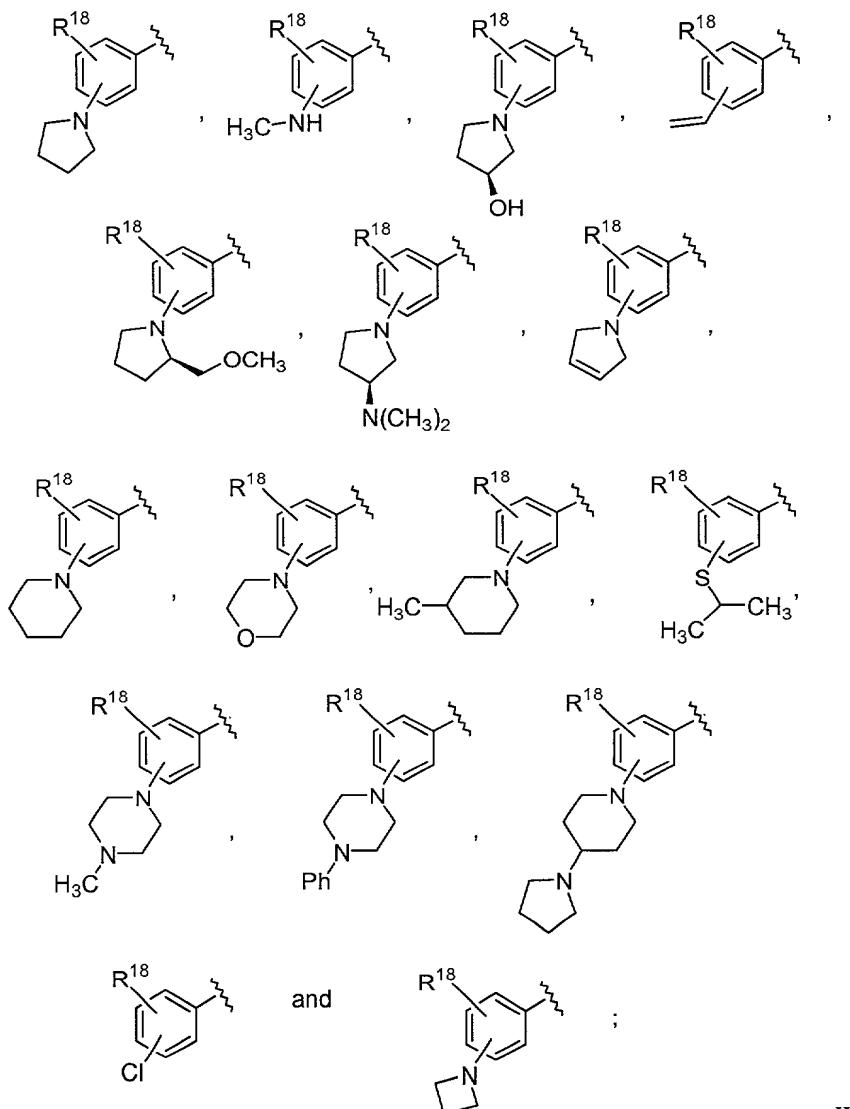


1 **30.** A composition in accordance with claim **29**, wherein A is a phenyl
2 group substituted with from one to three substituents selected from the group consisting
3 of (C₁-C₄)alkyl, (C₁-C₄)alkoxy, (C₁-C₄)haloalkyl, (C₁-C₄)haloalkoxy, halogen, nitro,
4 phenyl, naphthyl, pyrrolyl, pyrazolyl and -NR¹⁶R¹⁷ wherein R¹⁶ and R¹⁷ are
5 independently selected from the group consisting of hydrogen, (C₁-C₈)alkyl and (C₁-
6 C₈)heteroalkyl or are combined with the nitrogen atom to which each is attached to form
7 a four-, five-, six- or seven-membered ring optionally having additional heteroatoms as
8 ring members and optionally having additional substituents selected from the group
9 consisting of (C₁-C₈)alkyl, (C₁-C₈)heteroalkyl and phenyl.

1 **31.** A composition in accordance with claim **29**, wherein B is a phenyl
2 group substituted with from one to three substituents selected from the group consisting
3 of (C₁-C₄)alkyl, (C₁-C₄)alkoxy, (C₁-C₄)heteroalkyl, (C₁-C₄)haloalkyl, (C₁-C₄)haloalkoxy,
4 halogen, phenyl and phenoxy.

1 **32.** A composition in accordance with claim 29, wherein A is a phenyl
2 group substituted with from one to three substituents selected from the group consisting
3 of (C₁-C₄)alkyl, (C₁-C₄)alkoxy, (C₁-C₄)haloalkyl, (C₁-C₄)haloalkoxy, halogen and –
4 NR¹⁶R¹⁷ wherein R¹⁶ and R¹⁷ are independently selected from the group consisting of
5 hydrogen, (C₁-C₈)alkyl and (C₁-C₈)heteroalkyl or are combined with the nitrogen atom to
6 which each is attached to form a four-, five-, six- or seven-membered ring optionally
7 having additional heteroatoms as ring members and optionally having additional
8 substituents selected from the group consisting of (C₁-C₈)alkyl, (C₁-C₈)heteroalkyl and
9 phenyl, and B is a phenyl group substituted with from one to three substituents selected
10 from the group consisting of (C₁-C₄)alkyl, (C₁-C₄)alkoxy, (C₁-C₄)heteroalkyl, (C₁-
11 C₄)haloalkyl, (C₁-C₄)haloalkoxy, halogen, phenyl and phenoxy.

1 **33.** A composition in accordance with claim 29, wherein A is selected
2 from the group consisting of substituted or unsubstituted thienyl, substituted or
3 unsubstituted furanyl, substituted or unsubstituted indolyl, substituted or unsubstituted
4 benzothienyl, substituted or unsubstituted benzothienyl, and radicals of the formulae:



wherein

6 R¹⁸ is a member selected from the group consisting of (C₁-C₄)alkyl, (C₁-C₄)alkoxy, (C₁-
7 C₄)heteroalkyl, (C₁-C₄)haloalkyl, (C₁-C₄)haloalkoxy and halogen.

1 **34.** A composition in accordance with claim 33, wherein A is selected
2 from the group consisting of substituted or unsubstituted benzofuranyl, substituted or
3 unsubstituted benzothienyl, substituted or unsubstituted indolyl, substituted or
4 unsubstituted benzimidazolyl, substituted or unsubstituted benzthiazolyl and substituted
5 or unsubstituted benzoxazolyl.